



2016 Plan Year



City of Monroe Stormwater Management Program

Prepared by the City of
Monroe
806 W. Main Street
Monroe, WA 98272

Current permit term
begins August 1, 2013
and ends July 31, 2018.

Table of Contents

Purpose:.....	1
Introduction:.....	2
City of Monroe Storm Drainage Map:.....	3
Drainage Basin Map:	4
Program Components:	5
Section 1: Public Education and Outreach.....	5
Section 2: Public Involvement and Participation.....	7
Section 3: Illicit Discharge Detection and Elimination (IDD&E)	8
Section 4: Controlling Runoff from New Development, Redevelopment and Construction Sites.....	13
Section 5: Pollution Prevention and Operation and Maintenance for Municipal Operations..	17
Section 6. Compliance with Total Maximum Daily Load Requirements/Bacterial Pollution Control Plan for Snohomish Tributaries	21
Section 7. Program Reporting and Monitoring.....	22

Purpose:

The current National Pollutant Discharge Elimination System (NPDES) Permit is for a term of five years, beginning August 1, 2013 and ending July 31, 2018.

The Permit requires that all regulated municipalities create and implement a Stormwater Management Program (SWMP) which addresses five required program elements:

- 1) Public Education and Outreach,
- 2) Public Involvement and Participation,
- 3) Illicit Discharge Detection and Elimination,
- 4) Controlling Runoff from New Development, Redevelopment and Construction Sites and,
- 5) Municipal Operations and Maintenance

This document has been prepared to meet the City of Monroe's Western Washington Phase II Municipal Stormwater Permit requirement for written documentation of the City of Monroe's Stormwater Management Program.

The City of Monroe's Stormwater Management Program is intended to reduce the discharge of pollutants from the City of Monroe's Municipal Separate Storm Sewer System to the maximum extent practicable, meet Washington State's All Known and Reasonable Treatment requirements, and protect water quality. This goal will be accomplished via the inclusion of all Western Washington Phase II Municipal Stormwater Permit Stormwater Management Program components and implementation schedules into the City of Monroe's Stormwater Management Program.

In compliance with Western Washington Phase II Municipal Stormwater Permit requirements, where the City of Monroe is already implementing actions or activities called for in this document, the City of Monroe will continue those actions or activities regardless of the schedule called for in this document.

As part of the implementation of the City of Monroe's Stormwater Management Program, the City of Monroe will gather, track, maintain and use information on an on-going basis to evaluate the Stormwater Management Program development, implementation, compliance, and to set priorities. The City of Monroe tracks the cost of development and implementation of each component of the Stormwater Management Program.

This document is updated annually for submittal with the City of Monroe's Annual Report to the Washington State Department of Ecology.

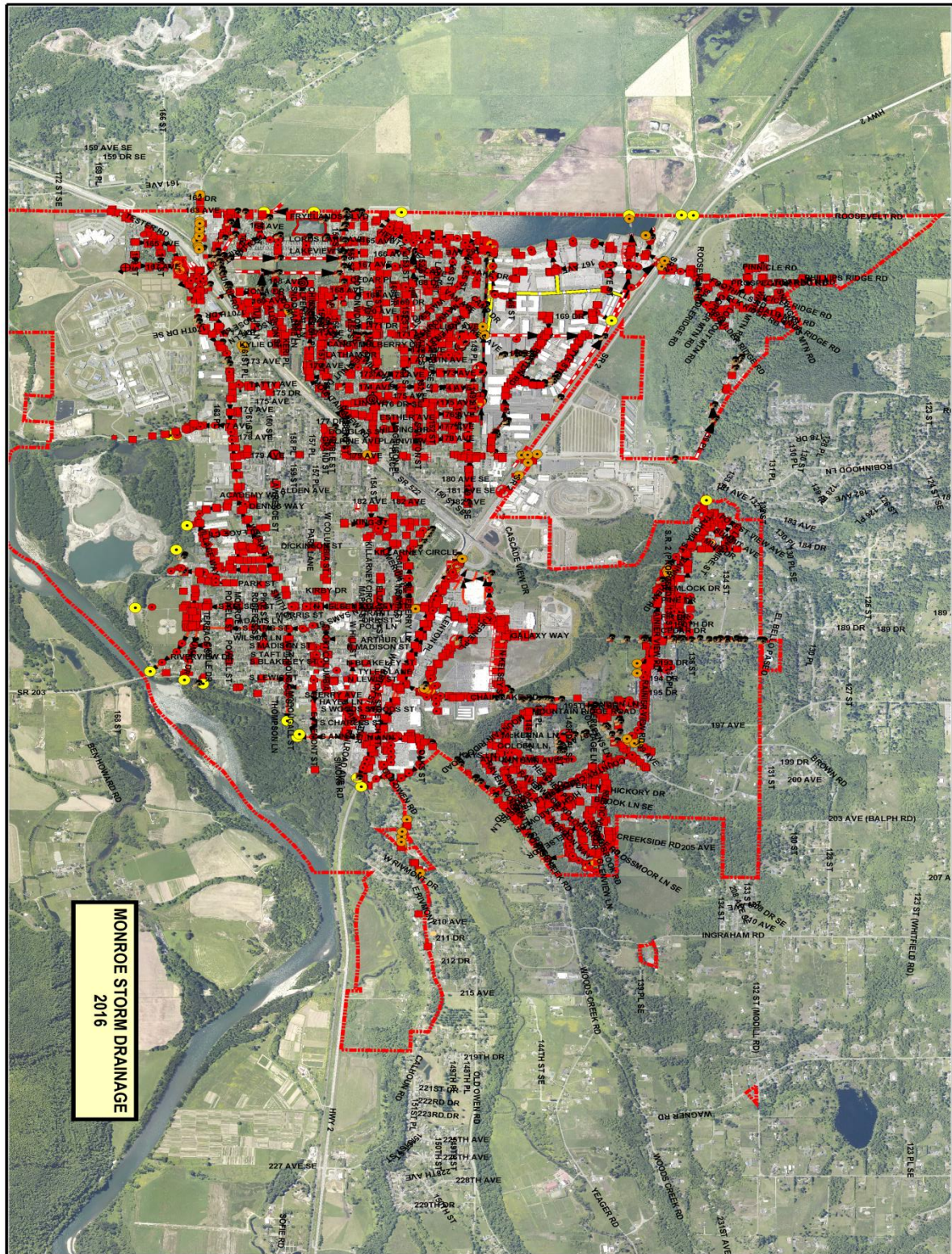
Introduction:

The City of Monroe is located approximately 25 miles northeast of Seattle, Washington, in Snohomish County. The City lies on a plateau at the base of the Cascade foothills overlooking the Skykomish River Valley. The Skykomish River borders the City on the south. Most of the businesses and residences within the city are located well above the 100-year floodplain. Woods Creek essentially forms the eastern border of the city; although, a small section of the city lies south and east of the creek. The majority of the city, including the commercial corridor along State Route 2 (SR 2), the Frylands development and the developing areas north of SR 2 lies within the French Creek drainage basin. Water from this basin drains to French Creek, which flows into the Snohomish River several miles west of the city.

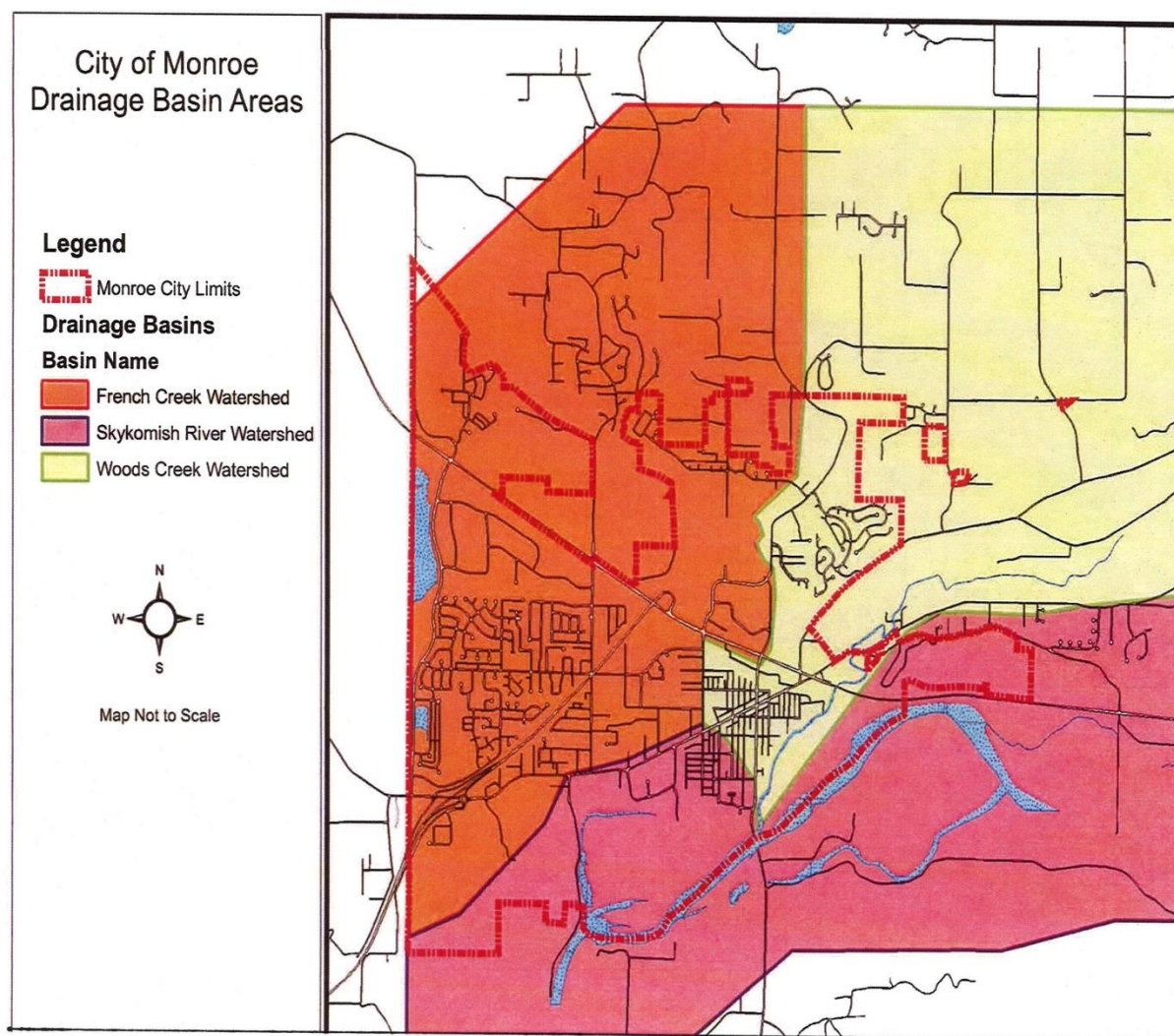
The majority of the City is built on very shallow slopes, typically less than 0.5 percent. The soils within these flat areas are composed of loamy, silty sands which are well suited to farming activities. Beneath these soils lie deep recessional outwash gravels which drain exceedingly well. The city does not have many areas which experience localized flooding because of the natural stormwater infiltration capabilities. However, due to an increase in impervious surfaces and urbanization as well as regulatory changes, storm water quality management has become an important issue.

Water quality degradation due to stormwater runoff can occur from many different sources. Stormwater runoff carries sediment from exposed construction sites and pollutants from residential, commercial, and industrial developments and agriculture and livestock into streams and other water bodies. Pollutants in stormwater runoff include metals such as lead, cadmium, zinc, and copper; oil and grease; pesticides and fertilizers; and bacteria. Urbanization within the Puget Sound basin has increased impervious surface areas such as rooftops, streets and parking areas. Impervious surfaces directly increase runoff volumes and peak flow rates. The increased pollutant loads and increased volumes of stormwater runoff result in impacts to downstream properties, to Puget Sound and to other downstream water bodies. Increased impervious surfaces also reduce infiltration to groundwater resources. Due to the listing of Puget Sound salmon species under the federal Endangered Species Act (ESA) and federal regulations under the National Pollution Discharge Elimination System (NPDES), implementation of stormwater control measures has become increasingly important.

City of Monroe Storm Drainage Map:



Drainage Basin Map:



Program Components:

Section 1: Public Education and Outreach

The City of Monroe's Stormwater Management Program includes an education program aimed at residents, businesses, industries, elected officials, policy makers, planning staff and other employees of the City of Monroe. The goal of the education program is to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts. The City of Monroe's education program has been developed locally, regionally and coordinated with the Snohomish County Conservation District and Snohomish County Surface Water Management. The City of Monroe will continue to work under an interlocal agreement with Snohomish County regarding targeted education programs. The City continues to work under a signed letter of intent to partner with Snohomish County Surface Water in a public education campaign. The City of Monroe continues to develop a stormwater specific webpage to help increase public awareness of stormwater related issues. The City contracted with the Snohomish Conservation District to teach classes within the Monroe School District such as elementary, middle school and high school curriculum, including stewardship activities. The City of Monroe collaborated with Snohomish County and the other Cities within the County to provide a regional Natural Yard Care Program. This program delivered residential Natural Yard Care workshops to a targeted audience, along with other Snohomish County municipalities, and measured the understanding and adoption of targeted behaviors. The program was partially funded by a Grant of Regional or Statewide Significance (GROSS grant) from the Department of Ecology. The Snohomish County partner communities conducted multi-session lecture series and an extensive program evaluation.

The outreach program is designed to achieve measurable improvements in the target audience's understanding of the problem and what they can do to solve it.

Education and outreach efforts are prioritized to target the following audiences and subject areas:

1. General public
 - a. General impacts of stormwater flows into surface waters.
 - b. Knowledge of mechanics of storm drains – where do they go?
 - c. Impacts from impervious surfaces.
 - d. Purpose and function of stormwater ponds
 - e. Pet waste pickup and proper disposal
 - f. Car washing and vehicle maintenance
 - g. Dumping and littering
 - h. Household hazardous waste use, storage and disposal
 - i. Preservation of pervious surfaces
 - j. Source control best management practices and environmental stewardship actions and opportunities in the areas of vehicle maintenance, landscaping and buffers.
 - k. Bacterial pollution problems in urban surface waters and the need to protect water quality by properly managing pet wastes.
2. Businesses, including home-based and mobile businesses
 - a. General impacts of stormwater flows into surface waters.
 - b. Knowledge of mechanics of storm drains – where do they go?
 - c. Impacts from impervious surfaces.
 - d. Purpose and function of stormwater ponds

- e. Best management practices for use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps, and other hazardous materials.
 - f. Impacts of illicit discharges and how to report them.
 - g. Best management practices for carpet cleaning, mobile businesses, and auto repair and maintenance.
3. Homeowners, landscapers, and property managers
- a. General impacts of stormwater flows into surface waters.
 - b. Knowledge of mechanics of storm drains – where do they go?
 - c. Impacts from impervious surfaces.
 - d. Purpose and function of stormwater ponds.
 - e. Yard care techniques protective of water quality.
 - f. Best management practices for use and storage of pesticides and fertilizers.
 - g. Best management practices for carpet cleaning.
 - h. Best management practices for auto repair and maintenance.
 - i. Impacts of car washing.
 - j. Pet waste pickup.
 - k. Home maintenance practices.
 - l. Low Impact Development techniques, including site design, pervious paving, rain gardens, and retention of forests and mature trees.
 - m. Stormwater pond maintenance.
4. Engineers, contractors, developers, review staff and land use planners
- a. Technical standards for stormwater site and erosion control plans.
 - b. Low Impact Development techniques, including site design, pervious paving, rain gardens and retention of forests and mature trees.
 - c. Stormwater treatment and flow control best management practices.

The City of Monroe continues to measure the understanding and adoption of the targeted behaviors among the targeted audience. The resulting measurements will be used to direct education and outreach resources most effectively, as well as to evaluate changes in adoption of the targeted behaviors. The City of Monroe has implemented stormwater education programs to comply with the Phase II permit. The permit has caused redirection and expansion of the education program in some respects, and we are implementing social marketing components to attempt measurement of behavior change.

The City of Monroe tracks and maintains records of public education and outreach activities. The goal of the City of Monroe's Public Education and Outreach Program is to reduce or eliminate behaviors and practices that cause or contribute to stormwater pollution.

The following efforts took place in 2015 and will continue in 2016. These efforts will be subject to alteration as portions of the social marketing program are implemented:

- Site visits to residential and business areas to distribute fliers
- Storm drain marking
- Volunteer program(s) implemented
- Mutt Mitt Stations

- General communication at local community events such as the Monroe Community Easter Egg Hunt, Watershed Day, National Night Out Against Crime and Earth Day.
- School classroom presentations with the assistance of the Snohomish Conservation District
- Commercial surface water pollution prevention technical assistance provided by ECOSSE
- Stormwater maintenance and best management practices technical outreach through the municipal stormwater operations and maintenance and private drainage inspection programs
- Development services, stormwater construction and development consultation
- Participation in regional groups to develop programs and efforts
- Radio, television and/or movie theatre ads
- Identify problem areas continuing to need concentrated education and outreach efforts
- Developed and implemented programs to achieve measurable improvements in our citizens' understanding of surface water/stormwater protection issues and behavior change
- Convinced target audiences to reduce or eliminate certain behaviors that contribute to stormwater pollution
- Continued participation with other NPDES permittees to identify appropriate regional messaging and evaluation
- Stewardship opportunities
- Continue to cooperate with regional STORM group to create a regional stormwater protection social marketing campaign aimed at increasing awareness and promoting behavior change.
- Evaluate programs to determine changes in understanding of stormwater effects and adoption of desirable behaviors within the targeted audiences.
- Summarize annual activities for the Public Education and Outreach components of the Annual Report annually by March 31.

Section 2: Public Involvement and Participation

The City of Monroe's Stormwater Management Program will include ongoing opportunities for public involvement through advisory councils, watershed committees, participation in developing rate-structures, stewardship programs and environmental activities or other similar activities. The City of Monroe will comply with applicable state and local public notice requirements when developing its Stormwater Management Program. The City will continue to examine ways to expand existing public involvement opportunities or to create new ones if needed. The City uses its public comment process at city council meetings to provide an opportunity for the public to make comments on the City's SWMP. The SWMP is posted on the City's website so that the public be involved in the ongoing development of the SWMP. The city encourages input and discussion at all community events.

The City will take the following minimum measures:

A. Opportunities for Public Participation:

The City of Monroe creates opportunities for the public to participate in the decision-making processes involving the development, implementation and update of the City of Monroe's entire Stormwater Management Program. The City of Monroe will continue to develop and implement

a process for consideration of public comments on its Stormwater Management Program. The City has in place processes to create opportunities for the public to have input on the SWMP. The draft and revised SWMP are posted on the city's website for comment and comments collected are considered with regard to SWMP changes and implementation. Citizens are also encouraged to provide feedback at city council meetings and community events.

B. Availability of Documents:

The City of Monroe will make its SWMP, the annual report and all other submittals required by the Western Washington Phase II Municipal Stormwater Permit, available to the public. The Stormwater Management Program will be posted on the City of Monroe's website.

Section 3: Illicit Discharge Detection and Elimination (IDD&E)

The City of Monroe's Stormwater Management Program will include an ongoing program to detect and remove illicit connections, discharges as defined in 40 CFR 122.26(b)(2) and improper disposal, including any spills not under the purview of another responding authority, into the municipal separate storm sewers owned or operated by the City of Monroe. The City of Monroe fully implemented an ongoing illicit discharge detection and elimination program prior to August 16, 2011. The City of Monroe has ongoing GIS data collection procedures in place. The majority of the city's stormwater system is mapped at the present time. We will continue mapping and updating our system as the data is collected. City staff presently responds to clogged storm drains, accidental spills and illegal discharges into Monroe's stormwater system. City crews actively search out illicit connections.

The City is required and will complete during the current permit cycle (S5.C.3) to:

- Design a program to prevent, trace and eliminate illicit connections and discharges.
- Field assess at least one high priority waterbody for IDD&E
- Update the city stormwater basemap including all known outfalls
- Maintain an ordinance that prohibits non-stormwater, illicit discharges into the storm system. It shall have escalating enforcement. Reviewed and revised by February 2, 2018.
- Field screening of the city's MS4 for illicit connections and/or discharges (40% by December 31, 2017).
- Publicize the stormwater hotline for reporting spills and illicit discharges.
- Train city staff and inform businesses of hazards associated with illicit discharges.

A. Development of Municipal Separate Storm Sewer Map:

A municipal storm sewer system map was developed prior to February 16, 2011. The municipal storm sewer system map will be periodically updated and will include the following information:

1. The City of Monroe already has mapping resources available. We will continue to convert field inventory to an electronic application so that new or revised information obtained in the field can be fed directly into maintenance and mapping applications. We will update our maps as improved field data becomes available. This is a continual

process and the map will be periodically updated to include: The location of all known municipal separate storm sewer system outfalls and receiving waters and structural stormwater best management practices owned, operated, or maintained by the City of Monroe.

2. The City of Monroe has initiated a program to develop and maintain a map of all connections to the municipal separate storm sewer system authorized or allowed by the City of Monroe. This is being done through a coordinated effort of Public Works and Engineering/GIS. Field personnel that are familiar with the City of Monroe's system are providing GPS data to the GIS Specialist. This will continue.
3. Geographic areas served by the City of Monroe's municipal separate storm sewer that do not discharge stormwater to surface waters.
4. The City of Monroe will make available to the Washington State Department of Ecology, upon request, the municipal storm sewer system map depicting the information required above. The City of Monroe will provide the municipal storm sewer system map to Ecology upon their request.
5. Upon request, and to the extent appropriate, the City of Monroe will provide mapping information to co-Permittees and secondary Permittees.

B. IDD&E Ordinance:

The City of Monroe implemented an ordinance to effectively prohibit non-stormwater, illegal discharges, and/or dumping into the City of Monroe's municipal separate storm sewer system to the maximum extent allowable under State and Federal law. The ordinance, MMC 13.34, was adopted in August of 2009. MS4 maps shall be periodically updated when necessary to meet the requirements of this section no later than February 2, 2018.

1. The regulatory mechanism does not need to prohibit the following categories of non-stormwater discharges:
 - Diverted stream flows.
 - Rising ground waters.
 - Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)).
 - Uncontaminated pumped ground water.
 - Foundation drains.
 - Air conditioning condensation.
 - Irrigation water from agricultural sources that is commingled with urban stormwater.
 - Springs.
 - Water from crawl space pumps.
 - Footing drains.
 - Flows from riparian habitats and wetlands.
 - Non-stormwater discharges covered by another Permit.
 - Discharges from emergency fire fighting activities in accordance with S2 Authorized Discharges.
2. The regulatory mechanism prohibits the following categories of non-stormwater discharges unless the stated conditions are met:

Discharges from potable water sources, including water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing and pipeline hydrostatic test water, unless planned discharges are de-chlorinated to a concentration of 0.1 ppm or less, pH-adjusted, if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments in the municipal separate storm sewer system.

Discharges from lawn watering and other irrigation runoff, unless these discharges are minimized through, at a minimum, public education activities (see Section 1) and water conservation efforts.

Chlorinated swimming pool discharges, unless the discharges are dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted and reoxygenized if necessary, volumetrically and velocity controlled to prevent re-suspension of sediments in the municipal separate storm sewer system. Swimming pool cleaning wastewater and filter backwash will not be discharged to the City of Monroe's municipal separate storm sewer system.

Street and sidewalk wash water, water used to control dust and routine external building wash down that does not use detergents, unless the City of Monroe reduces these discharges through, at a minimum, public education activities (see section 1) and/or water conservation efforts. To avoid washing pollutants into the City of Monroe's municipal separate storm sewer system, the City of Monroe will minimize the amount of street wash and dust control water used. At active construction sites, street sweeping will be performed prior to washing the street.

Other non-stormwater discharges, unless the discharges are in compliance with the requirements of the stormwater pollution prevention plan reviewed and approved by the City of Monroe, which addresses control of construction site de-watering discharges.

Washwater or stormwater runoff from commercial animal handling areas, unless source control and operational best management practices equivalent to those in the 2005 *Stormwater Management Manual for Western Washington* are implemented on the site.

Stormwater runoff from commercial composting facilities, unless the facility obtains from Ecology a General Permit to Discharge Stormwater Associated with Industrial Activities and commercial composting source control best management practices equivalent to those in the 2005 *Stormwater Management Manual for Western Washington* are implemented on the site.

3. The City of Monroe's Stormwater Management Program will, at a minimum, address each category above in accordance with the conditions stated therein.
4. The City's Stormwater management Program will further address any category of discharges in 1 or 2 above if the discharges are identified as significant sources of pollutants to waters of the State.
5. The ordinance includes escalating enforcement procedures and actions. Monroe Municipal Code Chapter 13.34 on Illicit Discharge Detection and Elimination and Monroe Municipal Code Chapter 1.04 on Code Enforcement.

6. The City of Monroe developed an enforcement strategy and will continue to work with other City departments, including public works and the police department, to ensure timely enforcement action takes place when a violation of the ordinance occurs.

C. Ongoing IDD&E Program:

The City of Monroe will continue to develop and implement an ongoing program to detect and address non-stormwater discharges, spills, illicit connections and illegal dumping into the City of Monroe's municipal separate storm sewer system. The program was fully implemented before August 16, 2011 and included:

1. Procedures for locating priority areas likely to have illicit discharges, including at a minimum: evaluating land uses and associated business/industrial activities present; areas where complaints have been registered in the past; and areas with storage of large quantities of materials that could result in spills.
2. Field assessment activities, including visual inspection of priority outfalls identified in 1, above, during dry weather and for the purposes of verifying outfall locations, identifying previously unknown outfalls, and detecting illicit discharges.

Receiving waters were prioritized for visual inspection prior to February 16, 2010, with field assessments made no later than February 16, 2011. Field assessments on at least one high priority water body will be made each year thereafter.

Screening for illicit connections will be conducted using: *"Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments"*, Center for Watershed Protection, October 2004, or another methodology of comparable effectiveness. The presence of sewage/septic system sources shall be investigated as part of all screenings.

3. Procedures for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported to the City of Monroe. Procedures will include detailed instructions for evaluating whether the discharge must be immediately contained and steps to be taken for containment of the discharge.

The City of Monroe will continue to follow the "Reporting Discharges and Spills under the Municipal Stormwater NPDES Permits" FAQ Publication Number: 07-10-089 (Rev. 09/09) until this document is updated by the Department of Ecology.

Compliance with this provision will be achieved by investigating (or referring to the appropriate agency) within 24 hours, on average, any complaints, reports or monitoring information that indicates a potential illicit discharge, spill, or illegal dumping; and immediately investigating (or referring) problems and violations determined to be emergencies or otherwise judged to be urgent or severe.

Responding to and reporting an ERTS notification will be immediate. The city has a system of responding and investigating spills and discharges. Complaints are prioritized based on severity, but most are investigated the same day. A case is created for each incident. We have prioritized water bodies for screening as was required.

4. Procedures for tracing the source of an illicit discharge; including visual inspections, and when necessary, opening manholes, using mobile cameras, collecting and analyzing water samples and/or other detailed inspection procedures.

The City performed this type of work in in the past when illicit discharges were suspected and we will continue this practice in 2016.

5. Procedures for removing the source of the discharge; including notification of appropriate authorities; notification of the property owner; technical assistance for eliminating the discharge; follow-up inspections; and escalating enforcement and legal actions if the discharge is not eliminated.

Compliance with this provision is achieved by initiating an investigation immediately, but definitely within 7 days of a report or discovery of a suspected illicit connection to determine the source of the connection, the nature and volume of discharge through the connection and the party responsible for the connection. Upon confirmation of the illicit nature of a storm drain connection, termination of the connection will be verified within 180 days, using enforcement authority as needed.

D. Public Information:

The City of Monroe will inform public employees, businesses and the general public of hazards associated with illegal discharges and improper disposal of waste. The City's stormwater coordinator provides an active education program, as described in Section 1 (S5.C.1) that will provide compliance with this requirement over the term of the permit.

1. Prior to August 16, 2011, the City of Monroe distributed appropriate information to target audiences identified pursuant to Section 1.
2. The City of Monroe publicly lists a hotline for public reporting of spills and other illicit discharges. The City of Monroe will keep a record of calls received and follow-up actions taken; and will include a summary in the annual report in accordance with the City of Monroe's Western Washington Phase II Municipal Stormwater Permit, *Reporting and Record Keeping Requirements*.

The City of Monroe has a hotline for reporting concerns. Complaint calls for spills and discharges are logged and responded to that same day. After hours, calls are routed to our Public Works Department, which has 24 hour staffing. They make the determination of who will respond, depending on the nature of the discharge. Actions requiring an ERTS number from Ecology (or that are sent to us via the ERTS system) are also tracked with this system.

E. Program Evaluation and Assessment:

The City of Monroe will adopt and implement procedures for program evaluation and assessment, including tracking the number and type of spills or illicit discharges identified; inspections made; and any feedback received from public education efforts. A summary of this information will be included in the City of Monroe's Annual Report in accordance with the City's Western Washington Phase II Municipal Stormwater Permit, *Reporting and Recordkeeping Requirements*.

As indicated, the tracking of spills is ongoing, as are inspections of private drainage facilities. Feedback from Public Education efforts is being analyzed via social marketing evaluation tools mentioned under the Public Education section earlier in this document.

F. Training:

The City of Monroe provided appropriate training for field staff on the identification and reporting of illicit discharges into the City of Monroe municipal separate storm sewer system.

1. The City of Monroe ensured that all municipal field staff who are responsible for identification, investigation, termination, cleanup, and reporting illicit discharges, including spills, improper disposal and illicit connections were trained to conduct these activities. Follow-up training will be provided as needed to address changes in procedures, techniques or requirements. The City of Monroe will document and maintain records of the training provided and the staff trained. All field staff received appropriate training on the identification and reporting of illicit discharges into the City of Monroe's MS4. Training will be updated and additional staff will be identified for this training in 2016. Twenty employees were trained to identify illicit discharges in 2015.
2. An ongoing training program was developed and implemented for all field staff, which, as part of their normal job responsibilities might come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system. The City of Monroe will continue to update its training practices and information. The City will also continue to document and maintain records of any training provided as needed. The City will be contacting the police department and fire to set up training in 2016.

Section 4: Controlling Runoff from New Development, Redevelopment and Construction Sites

The City of Monroe has developed, implemented, and enforced a program to reduce pollutants in stormwater runoff to its municipal separate storm sewer system from new development, redevelopment and construction site activities. This program is applied to all sites that disturb a land area 1 acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale. The program applies to private and public development, including roads. The "Technical Thresholds" in Appendix 1 of the City of Monroe's Western Washington Phase II Municipal Stormwater Permit will be applied to all sites 1 acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale.

The City is required during the current permit cycle (S5.C.4) to:

- Implement and enforce a program to reduce pollutants in stormwater runoff from new development, redevelopment and construction site activities.
- Implement an ordinance to address runoff from these activities no later than December 31, 2016. Specific requirements in S5.C5.a(i) through (iii) applied to applications submitted on/after January 1, 2017. Include legal authority to inspect and enforce maintenance standards for new and redevelopment. Include provisions to verify adequate long-term operations and maintenance. The ordinance must: address annual inspections of all permitted stormwater treatment and flow control BMPs/Facilities and catch basins in new residential developments every six months until 90% of the lots are constructed.
- At least 80% of scheduled inspections must be completed to be in compliance.
- Adopt Minimum Requirements in Appendix 1 of the Permit.
- Implement a site plan review process for private and public projects.
- Make available the "Notice of Intent for Construction Activity and Industrial Activity"
- Train staff on the site plan review process, inspections and enforcement.

- Implement low impact development (LID) code no later than December 31, 2016.

A. Ordinance:

Currently MMC 15.01 Storm Water Management includes minimum requirements, definitions and technical thresholds equal or more stringent than those listed in Appendix I of the Phase II permit. MMC 15.01 also includes a site planning and BMP selection and design criteria used to implement the minimum requirements by adopting the Ecology Manual by reference. The Stormwater Management Program includes an ordinance and other enforceable mechanisms that address runoff from new development, redevelopment and construction site projects pursuant to the City of Monroe's Western Washington Phase II Municipal Stormwater Permit. Existing City of Monroe requirements to apply stormwater controls at smaller sites, or at lower thresholds than required pursuant to this section, will be retained. The ordinance or other enforceable mechanisms include, at a minimum:

1. The Minimum Requirements, technical thresholds, and definitions in Appendix 1 of the City of Monroe's Western Washington Phase II Municipal Stormwater Permit or an equivalent approved by the Washington State Department of Ecology under the National Pollutant Discharge Elimination System Phase I Municipal Stormwater Permit, for new development, redevelopment, and construction sites. Adjustment and variance criteria equivalent to those in Appendix 1 of the City of Monroe's Western Washington Phase II Municipal Stormwater Permit will be included. More stringent requirements may be used, and/or certain requirements may be tailored to local circumstances through the use of basin plans or other similar water quality and quantity planning efforts. Such local requirements will provide equal protection of receiving waters and equal levels of pollutant control to those provided in Appendix 1 of the City of Monroe's Western Washington Phase II Municipal Stormwater Permit.
2. A site planning process and best management practice selection and design criteria that, when used to implement the minimum requirements in Appendix 1 of the City of Monroe's Western Washington Phase II Municipal Stormwater Permit (or equivalent approved by Ecology under the Phase I Municipal Stormwater Permit) will protect water quality, reduce the discharge of pollutants to the maximum extent practicable and satisfy the State requirement under Chapter 90.48 RCW to apply all known, available and reasonable methods of prevention, control and treatment prior to discharge. The City of Monroe will document how the criteria and requirements will protect water quality, reduce the discharge of pollutants to the maximum extent practicable, and satisfy State all known, available, and reasonable requirements.
3. The legal authority, through the approval process for new development, to inspect private stormwater facilities that discharge to the City of Monroe's Municipal Separate Storm Sewer System.
4. Provisions to allow non-structural preventive actions and source reduction approaches such as Low Impact Development Techniques, measures to minimize the creation of impervious surfaces and measures to minimize the disturbance of native soils and vegetation. Provisions for low impact development techniques should take into account

site conditions, access and long term maintenance. The City of Monroe has adopted the Stormwater Management Manual for Western Washington.

5. At the present time the City of Monroe does not allow construction sites to apply the “Erosivity Waiver” in Appendix 1 of the City of Monroe’s Western Washington Phase II Municipal Stormwater Permit.

B. Permitting Process:

The stormwater management program will include a permitting process with plan review, inspection and enforcement capability to meet the standards listed in 1 through 4 below, for both private and public projects, using qualified personnel (as defined in the *Definitions and Acronyms* section of the Western Washington Phase II Municipal Stormwater Permit). At a minimum, this program will be applied to all sites that disturb a land area 1 acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale.

1. Review of all stormwater site plans for proposed development activities.
2. Inspect, prior to clearing and construction, all known development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 of the City of Monroe’s Western Washington Phase II Municipal Stormwater Permit, *Identifying Construction Site Sediment Transport Potential*.
3. Inspect all known permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. Enforce as necessary based on the inspection.
4. Inspect all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater controls such as stormwater facilities and structural best management practices. Also, verify a maintenance plan is completed and responsibility for maintenance is assigned. Enforce as necessary based on the inspection.
5. Compliance with the inspection requirements in 2, 3 and 4 above will be determined by the presence and records of an established inspection program designed to inspect all sites and achieving at least 95% of scheduled inspections.
6. The City of Monroe enforcement strategies are developed and implemented to respond to issues of non-compliance.
7. At the present time the City of Monroe does not allow construction sites to apply the “Erosivity Waiver” in Appendix 1 of the City of Monroe’s Western Washington Phase II Municipal Stormwater Permit.

C. Long-term Operation and Maintenance:

The stormwater management program includes provisions to verify adequate long-term operation and maintenance of post-construction stormwater facilities and best management practices that are permitted and constructed pursuant to (B) above. These provisions include:

1. Adoption of an ordinance that clearly identifies the party responsible for maintenance and requires inspection of facilities in accordance with the requirements in 2 through 4 below; and establishes enforcement procedures.
2. The City of Monroe has established maintenance standards that are as protective or more protective of facility function as those specified in Chapter 4 of Volume V of the 2005 *Stormwater Management Manual for Western Washington*. For facilities which do not have maintenance standards, the City of Monroe will develop a maintenance standard.
 - a. The purpose of the maintenance standard is to determine if maintenance is required. The maintenance standard is not a measure of the facilities required condition at all times between inspections. Exceeding the maintenance standard between the period of inspections is not a Western Washington Phase II Municipal Stormwater Permit violation.
 - b. Unless there are circumstances beyond the City of Monroe's control, when an inspection identifies an exceedance of the maintenance standard, maintenance will be performed:

Within 1 year for wet pool facilities and retention/detention ponds.
Within 6 months for typical maintenance.
Within 9 months for maintenance requiring re-vegetation.
Within 2 years for maintenance that requires capital construction of less than \$25,000.

Circumstances beyond the City of Monroe's control include denial or delay of access by property owners, denial or delay of necessary permit approvals and unexpected reallocations of maintenance staff to perform emergency work. For each exceedance of the required timeframe, the City of Monroe must document the circumstances and how they were beyond their control.
3. Annual inspections of all stormwater treatment and flow control facilities (other than catch basins) permitted by the City of Monroe unless there are maintenance records to justify a different frequency.

Reducing the inspection frequency will be based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the City of Monroe may substitute written statements to document a specific less frequent inspection schedule. Written statements will be based on actual inspection and maintenance experience and will be certified in accordance with G19 of the City of Monroe's Western Washington Phase II Municipal Stormwater Permit, *Certification and Signature*.
4. Inspections of all new flow control and water quality treatment facilities, including catch basins, for new residential developments that are a part of a larger common plan of development or sale, every 6 months during the period of heaviest house construction (i.e., 1 to 2 years following subdivision approval) to identify maintenance needs and enforce compliance with maintenance standards as needed. The City of Monroe currently has had an ordinance requiring maintenance of private facilities.

D. Record Keeping:

The program includes a procedure for keeping records of inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations, and other enforcement records. Records of maintenance inspections and maintenance activities will be maintained. The City of Monroe keeps records of all projects disturbing more than one acre, and all projects of any size that are part of a common plan of development or sale that is greater than one acre that have been approved after February 16, 2007. The City of Monroe keeps records of construction inspections, and has verified procedures to ensure that all inspections are completed in a timely manner. The City also tracks drainage system inspections and maintenance. These records, as well as warning letters and violation notices and other enforcement actions are kept in the operations department. Records are kept of all development requiring a permit.

E. Availability of Notice of Intent :

The City of Monroe made available copies of the "Notice of Intent for Construction Activity" and makes copies of the "Notice of Intent for Industrial Activity" available to representatives of proposed new development and redevelopment. Ecology requests that municipal stormwater permittees discard any copies of the construction NOI, and instead direct representatives to the appropriate construction stormwater web page:

<http://www.ecy.wa.gov/programs/wq/stormwater/construction/enoi.html>.

F. Training:

The City of Monroe trained all staff responsible for implementing the program to control stormwater runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections and enforcement. Follow-up training will be provided as needed to address changes in procedures, techniques or staffing. The City of Monroe will document and maintain records of the training provided and the staff trained.

Section 5: Pollution Prevention and Operation and Maintenance for Municipal Operations

The City of Monroe developed and implemented an operations and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. The City's current Operations and Maintenance (O&M) program for Streets, Water, Sewers and Storm Drainage is based on Element 10 of the Regional Road Maintenance Program, which was developed for ESA compliance, and approved by NOAA Fisheries. Element 10 of the program includes a selection and implementation process for BMPs, and a training program for use of the BMPs.

The City is required during the current permit cycle (S5.C.5) to:

A. Maintenance Standards:

The City of Monroe will establish maintenance standards that are as protective, or more protective, of facility function as those specified in Chapter 4 of Volume V of the 2005 *Stormwater Management Manual for Western Washington*. For facilities which do not have

maintenance standards, the City of Monroe will develop a maintenance standard. Maintenance standards have been developed for those specified in the permit.

1. The purpose of the maintenance standard is to determine if maintenance is required. The maintenance standard is not a measure of the facilities required condition at all times between inspections. Exceeding the maintenance standard between inspections and/or maintenance is not a Western Washington Phase II Municipal Stormwater Permit violation.
2. Unless there are circumstances beyond the City of Monroe's control, when an inspection identifies an exceedance of the maintenance standard, maintenance will be performed:
 - Within 1 year for wet pool facilities and retention/detention ponds.
 - Within 6 months for typical maintenance.
 - Within 9 months for maintenance requiring re-vegetation.
 - Within 2 years for maintenance that requires capital construction of less than \$25,000.

Circumstances beyond the City of Monroe's control include denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each exceedance of the required timeframe, the City of Monroe will document the circumstances and how they were beyond their control. Maintenance standards consistent with the 2005 Ecology Manual are in place and include tracking and documentation procedures. We continue to work with other City departments to ensure that their practices are consistent with the Manual.

B. General Inspections:

Annual inspection of all municipally owned or operated permanent stormwater treatment and flow control facilities, other than catch basins, and takes appropriate maintenance actions in accordance with the adopted maintenance standards. The annual inspection requirement may be reduced based on inspection records.

Reducing the inspection frequency will be based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the City of Monroe may substitute written statements to document a specific less frequent inspection schedule. Written statements will be based on actual inspection and maintenance experience and will be certified in accordance with G19 of the City of Monroe's Western Washington Phase II Municipal Stormwater Permit, *Certification and Signature*. Standards and checklists consistent with the 2005 Ecology Manual are being used for the annual inspections.

C. Post-Storm Inspections:

The City conducts spot checks of potentially damaged permanent treatment and flow control facilities (other than catch basins) after major (greater than 24-hour-10-year recurrence interval rainfall) storm events. The City also checks streets and catch basins for possible flooding after a significant rain event. If spot checks indicate widespread damage/maintenance needs, the City will inspect the stormwater treatment and flow control facilities that may be affected. The City should conduct repairs or take appropriate maintenance action in accordance with maintenance standards established above, based on the results of the inspections. Maintenance standards for

spot checks have been developed. We have selected the sites that will be assessed after major storm events.

D. Catch Basins and Inlet Inspections:

Inspection of all catch basins and inlets owned or operated by the City of Monroe will take place at least once before the end of the City of Monroe's Western Washington Phase II Municipal Stormwater Permit term. Clean catch basins if the inspection indicates cleaning is needed to comply with maintenance standards established in the 2005 *Stormwater Management Manual for Western Washington*. Decant water will be disposed of in accordance with Appendix 6 of the City of Monroe's Western Washington Phase II Municipal Stormwater Permit, *Street Waste Disposal*.

Inspections may be conducted on a "circuit basis" whereby a sampling of catch basins and inlets within each circuit is inspected to identify maintenance needs. Include in the sampling an inspection of the catch basin immediately upstream of any system outfall. Clean all catch basins within a given circuit at one time if the inspection sampling indicates cleaning is needed to comply with maintenance standards established above.

As an alternative to inspecting catch basins on a "circuit basis," the City of Monroe may inspect all catch basins and clean only catch basins where cleaning is needed to comply with maintenance standards.

Inspecting and cleaning catch basins will be done consistent with the maintenance standard in the 2005 Ecology Manual. Additional equipment and/or manpower needed to accomplish this program will be determined as the program is developed and implemented each year.

E. Compliance:

Compliance with the inspection requirements in A, B, C and D. above will be determined by the presence of an established inspection program designed to inspect all sites and achieving inspection of all sites.

F. Reduction of Stormwater Impacts:

Establishment and implementation of practices to reduce stormwater impacts associated with runoff from streets, parking lots, roads or highways owned or maintained by the City of Monroe, and road maintenance activities conducted by the City of Monroe. The following activities will be addressed:

- Pipe cleaning
- Cleaning of culverts that convey stormwater in ditch systems
- Ditch maintenance
- Street cleaning
- Road repair and resurfacing, including pavement grinding
- Snow and ice control
- Utility installation
- Pavement striping maintenance
- Maintaining roadside areas, including vegetation management
- Dust control

The City's current Operations and Maintenance (O&M) program for Streets, Water, Sewers and Storm Drainage is based on Element 10 of the Regional Road Maintenance Program, which was

developed for ESA compliance, and approved by NOAA Fisheries. Element 10 of the program includes a selection and implementation process for BMPs, and a training program for use of the BMPs. The City's O&M program includes the IDDE component. Other work groups within the City have included the appropriate practices in their procedures to comply with the permit.

G. Policies and Procedures:

Establishment and implementation of policies and procedures to reduce pollutants in discharges from all lands owned or maintained by the City of Monroe and subject to the City of Monroe's Western Washington Phase II Municipal Stormwater Permit, including but not limited to: parks, open space, road right-of-way, maintenance yards, and stormwater treatment and flow control facilities. These policies and procedures will address, but are not limited to:

- Application of fertilizer, pesticides, and herbicides including the development of nutrient management and integrated pest management plans.
- Sediment and erosion control.
- Landscape maintenance and vegetation disposal.
- Trash management.
- Building exterior cleaning and maintenance.

The City's current Operations and Maintenance (O&M) program for Streets, Water, Sewers and Storm Drainage is based on Element 10 of the Regional Road Maintenance Program, which was developed for ESA compliance, and approved by NOAA Fisheries. Element 10 of the program includes a selection and implementation process for BMPs, and a training program for use of the BMPs. The City's O&M program includes the IDDE component. Other work groups within the City have included the appropriate practices in their procedures to comply with the permit.

H. Training:

The City has developed and implemented an on-going training program for employees of the City of Monroe whose construction, operations or maintenance job functions may impact stormwater quality. The training program will address the importance of protecting water quality, the requirements of the City of Monroe's Western Washington Phase II Municipal Stormwater Permit, operation and maintenance standards, inspection procedures, selecting appropriate best management practices, ways to perform their job activities to prevent or minimize impacts to water quality, and procedures for reporting water quality concerns, including potential illicit discharges. Follow-up training will be provided as needed to address changes in procedures, techniques or requirements. The City of Monroe will document and maintain records of training provided.

Training of the field crews and maintenance staff for Public Works and Parks using the Regional Road Maintenance Manual to address the importance of protecting water quality, operation and maintenance, selecting BMPs, and ways to perform their job activities to prevent or minimize impacts to water quality have been completed for most of the field crews. Other training that is required will be developed and implemented as the programs are updated, developed and needed.

I. Special Facility Requirements:

Development and implementation of a Stormwater Pollution Prevention Plan for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the City of Monroe in areas subject to the City of Monroe's Western Washington Phase II Municipal Stormwater Permit that are not required to have coverage under the Industrial Stormwater

General Permit. Implementation of non-structural best management practices will begin immediately after the pollution prevention plan is developed. A schedule for implementation of structural best management practices will be included in the Stormwater Pollution Prevention Plan. Generic Stormwater pollution Prevention Plans that can be applied at multiple sites may be used to comply with this requirement. The Stormwater Pollution Prevention Plan will include periodic visual observation of discharges from the facility to evaluate the effectiveness of the best management practices.

J. Record Keeping:

Records of inspections and maintenance or repair activities conducted by the City of Monroe will be maintained in accordance with the City of Monroe's Western Washington Phase II Municipal Stormwater Permit, *Reporting Requirements*. The City continues to refine current record keeping procedures for inspections, maintenance and repair activities. The city will continue this practice in 2016.

Section 6. Compliance with Total Maximum Daily Load Requirements/Bacterial Pollution Control Plan for Snohomish Tributaries

The City is keeping records of all actions required by the Permit for TMDL compliance. The City will provide the results of all sampling to Ecology upon request.

A. Action Required:

The City of Monroe's Western Washington Phase II Municipal Stormwater Permit requires the City of Monroe Illicit Connection Detection and Elimination program to address commercial animal handling areas and commercial composting facilities. At this time none of these facilities have been identified as contributing to the pollutant load in the City of Monroe Municipal Separate Storm Sewer System. The City will conduct additional IDD&E activities within these areas if found.

B. Monitoring and Implementation Requirements:

The City of Monroe chose a Targeted Implementation Approach to fulfill these requirements. The City of Monroe submitted a Quality Assurance Project Plan (QAPP) for the sampling of discharges from stormwater conveyances with the geographic area of the municipal separate storm sewer system to the Washington State Department of Ecology.

The QAPP includes an adequate number of sampling points and adequate sampling frequency to reasonably characterize the receiving water. The City of Monroe is sampling the following sites:

Site Name/ID	Watershed	Latitude	Longitude	Site Name - Description
French Creek	French Creek	48.87324	-122.01171	Lower Cripple Creek at city boundary south of Hwy 2, down from TMDL site CCH2
Cripple Creek	French Creek	47.87297	-121.99069	Middle Cripple Creek on upstream side of 179th Ave SE, at TMDL site CCLS
Lake Tye Outfall	French Creek	47.87050	-122.01238	North outlet of Lake Tye on west shore
Lake Tye Inlet ^a	French Creek	47.86331	-122.00873	North inlet (open ditch line) of Lake Tye on east shore.
Lords Lake Outfall ^a	French Creek	47.85495	-122.01166	Lake outlet at northwest corner of Lords Lake, in between the weir and vault

Southwest Ditch ^a	French Creek	47.85235	-122.01227	East side of Fryelands Blvd at city boundary
Al Borlin Bridge	Woods Creek	47.85747	-121.96111	Lower Woods Creek at footbridge, at TMDL site WCDN
Eagles Park	Woods Creek	47.85747	-121.96111	Storm drain located behind Albertsons, drains to Lower Woods Creek

These sites are sampled monthly and will be for the duration of the permit cycle.

A Bacteria Pollution Control Plan was developed by the City of Monroe prior to January of 2011. The BPCP was posted on the city's website and a public review process for the Bacterial pollution Control Plan was done prior to April 2011. A Final Bacterial Pollution Control Plan was submitted to Ecology.

Section 7. Program Reporting and Monitoring

A. No later than March 31st of each year the City of Monroe submits an annual report to the Washington State Department of Ecology.

B. The annual report and SWMP will be filed electronically and submitted to the Washington State Department of Ecology with all attachments.

C. The City of Monroe will keep all records related to the Western Washington Phase II Municipal Stormwater Permit and the Stormwater Management Program for at least five years. Except for the requirements of the annual reports described in this permit, records will be submitted to the Washington State Department of Ecology only upon request,

D. The City of Monroe will make all records related to the Western Washington Phase II Municipal Stormwater Permit and the City of Monroe's Stormwater Management Program available to the public at reasonable times during business hours. The City of Monroe will provide a copy of the most recent annual report to any individual or entity upon request.

1. A reasonable charge may be assessed by the City of Monroe for making photocopies of records.
2. The City of Monroe may require reasonable advance notice of intent to review records related to the City of Monroe's Western Washington Phase II Municipal Stormwater Permit.

E. Each annual report will include the following:

1. A copy of the City of Monroe's current Stormwater Management Program documentation.
 - a. Status of implementation of each component of the Stormwater Management Program in Sections 1 through 6.
 - b. An assessment of the City of Monroe's progress in meeting the minimum measures in Sections 1-6.
 - c. A description of activities being implemented to comply with each component of the Stormwater management Program, including the

- number and type of inspections, enforcement actions, public education and involvement activities, and illicit discharges detected and eliminated.
- d. The City of Monroe's Stormwater Management Program implementation schedule and plans for meeting Western Washington Phase II Municipal Stormwater Permit deadlines, and the status of Stormwater Management Program implementation to date. If permit deadlines are not met, or may not be met in the future, the following will be included: reasons why, corrective steps taken and proposed, and expected dates that the deadlines will be met.
 - e. A summary of the City of Monroe's evaluation of the City of Monroe's Stormwater Management Program, according to the Western Washington Phase II Municipal Stormwater Permit.
 - f. Notice, if applicable, that the City of Monroe is relying on another governmental entity to satisfy any of the obligations under this permit.
 - g. Updated information from the prior annual report plus any new information received during the reporting period, pursuant to the Western Washington Phase II Municipal Stormwater Permit.
 - h. Certification and signature pursuant to the Western Washington Phase II Municipal Stormwater Permit, and notification of any changes to authorization.
3. Notification of any annexations, incorporations or jurisdictional boundary changes resulting in an increase or decrease in the City of Monroe's geographic area during the reporting period, and implications for the Stormwater Management Program.
 4. A description of any stormwater monitoring or studies conducted by the City of Monroe during the reporting period. If stormwater monitoring was conducted on behalf of the City of Monroe, or if studies or investigations conducted by other entities were reported to the City of Monroe, a brief description of the type of information gathered or received shall be included in the annual report(s) covering the time period(s) the information was received.
 5. An assessment of the appropriateness of the best management practices identified by the City of Monroe for each component of the Stormwater Management Program; and any changes made, or anticipated to be made, to the best management practices that were previously selected to implement the Stormwater Management Program, and why.
- F. The City of Monroe will prepare for future monitoring:
- The City of Monroe has chosen Status and Trends Monitoring Option #1 for its method to meet the requirements of Section 8 of the NPDES Phase II Permit. Option #1 requires that the City pay annually into a collective fund to implement RSMP small streams and marine nearshore status and trends monitoring in Puget Sound. Stormwater management program effectiveness studies requirement will be met by the City through Effectiveness Studies Option #1 listed in the Permit. The

City will pay annually into a collective fund to implement RSMP effectiveness studies. Source identification and diagnostic monitoring requirements will be met by the City by paying annually into a collective fund to implement the RSMP Source Identification Information Repository (SIDIR).

